

P a t e n t c l a i m s :

1. An optical element (1; 11; 21; 31; 41; 51; 61; 71; 81) in the form of an at
5 least partially transparent face that comprises both transparent areas and
essentially non-transparent areas,
c h a r a c t e r i s e d in that
- the transparent areas are arranged sufficiently close to each other for
10 the individual, intermediate, essentially non-transparent areas to be
essentially invisible to the naked eye, at least when the element is
viewed from a given distance that corresponds, however, at most to
distances within an indoor-facility; and
 - the essentially non-transparent areas are arranged sufficiently close to
15 each other and have a sufficient extent at right angles to the face for
the intermediate, transparent areas to have a depth/width ratio that
causes the optical element to allow, at a given point on the face, pas-
sage of light with given angles of incidence, while light having other
angles of incidence are unable to pass through the optical element at
20 the point in question.
2. An optical element according to claim 1, c h a r a c t e r i s e d
in that said essentially, non-transparent areas constitute a continuous face,
such that the transparent areas appear as openings (2; 12, 13) in this face.
- 25 3. An optical element according to claim 2, c h a r a c t e r i s e d
in that said openings are elongate, whereby they have, in a given direction in
the plane of the face, an extent that considerably exceeds the extent in a di-
rection at right angles thereto in the plane of the face.
- 30 4. An optical element according to claim 1, c h a r a c t e r i s e d
in that said transparent areas constitute a continuous face, such that the es-
sentially non-transparent areas appear as islands (22) in this face.

5. An optical element according to any one of claims 1 through 4, c h a r a c t e r i s e d in that the transparent areas and the essentially non-transparent areas are arranged in a mutually regular pattern.

5 6. An optical element according to any one of claims 1 through 5, c h a r a c t e r i s e d in that the individual transparent areas have, at least in one direction in the plane of the face, an extent that is as a maximum ten times the extent of the essentially non-transparent areas at right angles to the face.

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7. An optical element according to any one of claims 1 through 6, c h a r a c t e r i s e d in that the transparent areas are arranged such that the individual, intermediate, essentially non-transparent areas have an extent that is, at least in one direction in the plane of the face, less than 10 mm.

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8. An optical element according to claim 7, c h a r a c t e r i s e d in that the transparent areas are arranged such that the individual, intermediate, non-transparent areas have an extent that is, at least in one direction in the plane of the face, smaller than 1 mm.

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9. An optical element according to claim 8, c h a r a c t e r i s e d in that the transparent areas are arranged such that the individual, intermediate, essentially non-transparent areas have an extent that, at least in one direction in the plane of the face, is less than 100 μm .

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10. An optical element according to any one of claims 1 through 9, c h a r a c t e r i s e d in that the essentially non-transparent areas consist of a material with a low reflectivity, such that light is only to a limited extent reflected from the surfaces of the essentially, non-transparent areas.

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11. An optical element according to any one of claims 1 through 10, c h a r a c t e r i s e d in that that it is configured as a film that

can be attached to a surface on another, at least partially transparent optical element.

12. An optical element according to any one of claims 1 through 10,
5 c h a r a c t e r i s e d in that it is configured as an integral part of a pane.

13. An optical element according to any one of claims 1 through 12,
c h a r a c t e r i s e d in that at least a part of the essentially non-
10 transparent areas are configured for functioning as electrode (67; 76) in a solar cell (61; 71).

14. An optical element according to claim 13, c h a r a c t e r -
i s e d in that said solar cell (61; 71) is a photo-electro-chemical solar
15 cell.

15. An optical element according to claim 14, c h a r a c t e r -
i s e d in that the essentially, non-transparent areas comprise a semi-
conductor, on which a suitable dye is adsorbed, and are configured for func-
20 tioning as photo-electrode (67).

16. An optical element according to claim 14, c h a r a c t e r -
i s e d in that the essentially non-transparent areas comprise electrically
conductive particulate material and are configured for functioning as a
25 counter electrode (76).

17. An optical element according to any one of claims 1 through 12,
c h a r a c t e r i s e d in that the essentially, non-transparent ar-
eas comprise surfaces (86) that are configured as solar cells.
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18. An optical element according to claim 17, c h a r a c t e r -
i s e d in that said solar cells (86) are configured as thin-film solar cells.